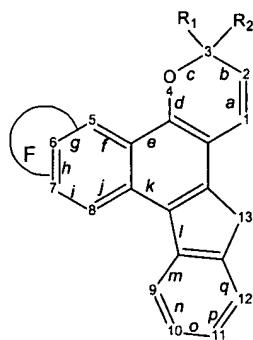


## IN THE CLAIMS

Please amend the claims as follows:

1. (PREVIOUSLY PRESENTED) A photochromic naphthopyran having a central nucleus of the formula:



wherein F is a dihydrofuran group fused to the g, h, or i side;

R<sub>1</sub> and R<sub>2</sub> are the atoms or groups providing photochromic properties to the naphthopyran.

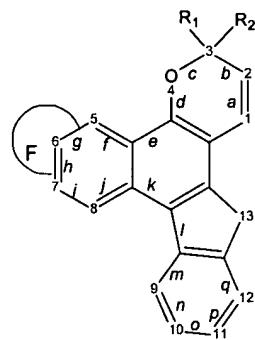
2. (ORIGINAL) The photochromic naphthopyran of claim 1 wherein R<sub>1</sub> and R<sub>2</sub> are selected from the group consisting of aliphatic groups, aromatic groups, and heterocyclic groups.
3. (ORIGINAL) The photochromic naphthopyran of claim 1 wherein R<sub>1</sub> and R<sub>2</sub> are selected from the group consisting of alkyl groups, aromatic groups, and heterocyclic groups.
4. (ORIGINAL) The photochromic naphthopyran of claim 1 wherein R<sub>1</sub> and R<sub>2</sub> are selected from alkyl groups, phenyl groups, and naphthyl groups.
5. (CANCELLED)

6. (CANCELLED)

7. (CANCELLED)

8. (CANCELLED)

9. (PREVIOUSLY PRESENTED) The photochromic naphthopyran of claim 1  
A photochromic naphthopyran having a central nucleus of the formula:



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wherein F is a dihydrofuran group fused to the g, h, or i side;

R<sub>1</sub> and R<sub>2</sub> are the atoms or groups providing photochromic properties to the naphthopyran, and the 13-position may be substituted

wherein the 13-position has substituents R<sub>3</sub> and R<sub>4</sub>, wherein R<sub>3</sub> and R<sub>4</sub> individually represent

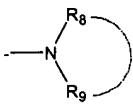
a hydrogen atom,

a hydroxy group,

a halogen atom,

a linear, branched, or cyclic C1-C6 alkyl, alkenyl, or alkynyl group,

a linear, branched, or cyclic C1-C6 alkoxy or alkenoxy group,



an amino group:

in which R<sub>8</sub> and R<sub>9</sub>, which are the same or different, independently representing a hydrogen, a linear, branched, or cyclic alkyl group comprising 1 to 6 carbon atoms, an aryl or heteroaryl group, or representing (together with the nitrogen atom to which they are bound) a 5- to 7-membered ring which can comprise at least one other heteroatom selected from oxygen, sulfur and nitrogen, said nitrogen being optionally substituted with an R<sub>10</sub> group, which is a linear or branched alkyl group comprising 1 to 6 carbon atoms, a phenyl, a benzyl, or a naphthyl,

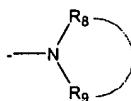
an aryl or heteroaryl group selected from the group consisting of phenyl, naphthyl, phenanthryl, pyrenyl, quinolyl, isoquinolyl, benzofuranyl, thienyl, benzothienyl, dibenzofuranyl, dibenzothienyl, carbazolyl, indolyl,

a mono-substituted phenyl having a substituent at the para position that is a linking group, -(CH<sub>2</sub>)<sub>t</sub> -- or --O--(CH<sub>2</sub>)<sub>t</sub> --, wherein t is the integer 1, 2, 3, 4, 5 or 6, connected to an aryl group, which is a member of another photochromic naphthopyran,

an aralkyl or heteroaralkyl group, the alkyl part of which is linear or branched, comprising 1 to 4 carbon atoms,

a --C(O)R<sub>11</sub>, --OC(O)R<sub>11</sub>, or COOR<sub>11</sub> group, wherein R<sub>11</sub> is hydrogen, hydroxy, linear or branched C<sub>1</sub>-C<sub>6</sub> alkyl, linear or branched C<sub>1</sub>-C<sub>6</sub> alkoxy, phenyl, mono-substituted phenyl, naphthyl, mono-substituted naphthyl, amino, mono(C<sub>1</sub>-C<sub>6</sub>) alkylamino or di(C<sub>1</sub>-C<sub>6</sub>)alkylamino, e.g., N,N-dimethyl amino, N-methyl-N-propyl amino, morpholino, piperidino or pyrrolidyl, said amino substituents being selected from the group consisting of C<sub>1</sub>-C<sub>6</sub> alkyl, phenyl, benzyl and naphthyl, and said benzyl and phenyl substituents being C<sub>1</sub>-C<sub>6</sub> alkyl or C<sub>1</sub>-C<sub>6</sub> alkoxy,

a group --OR<sub>12</sub>, wherein R<sub>12</sub> is a C1-C6 acyl, an aralkyl or heteroaralkyl group with a C1-C3 alkyl portion, a (C3-C7)cycloalkyl group, a (C2-C4)alkyl group, or R<sub>12</sub> is the group, --CH(R<sub>13</sub>)R<sub>14</sub>, wherein R<sub>13</sub> is hydrogen or C1-C3 alkyl and R<sub>14</sub> is --CN, --CF<sub>3</sub>, or --COOR<sub>15</sub>, wherein R<sub>15</sub> is hydrogen or linear, branched, or cyclic alkyl, aralkyl or heteroaralkyl,  
a group --CH(R<sub>16</sub>)<sub>2</sub> wherein R<sub>16</sub> is --CN or --COOR<sub>15</sub>,  
a group --CH(R<sub>15</sub>)R<sub>17</sub>, wherein R<sub>17</sub> is --COOR<sub>11</sub>, --C(O)R<sub>18</sub> or --CH<sub>2</sub> OR<sub>19</sub>, wherein R<sub>18</sub> is hydrogen, linear, branched, or cyclo-alkyl, aryl groups, amino group of formula



R<sub>19</sub> is hydrogen, --C(O)R<sub>11</sub>, alkyl, alkoxyalkyl, phenylalkyl, mono-alkoxy substituted phenyl-alkyl, or aryl groups,

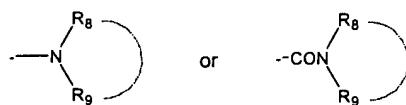
a polyether, polyamide, polycarbonate, polycarbamate, polyurea, polyester residue, or a group ended by a polymerizable residue;

or R<sub>3</sub> and R<sub>4</sub> may together form a 3- to 7-member spiro-cyclic ring which can comprise at least one heteroatom selected from oxygen, sulfur, and nitrogen.

10. (PREVIOUSLY PRESENTED) The photochromic naphthopyran of claim 9 wherein,

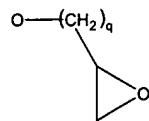
- (a) in the 5- and/or 8-position, a group R<sub>6</sub> is present wherein R<sub>6</sub> represents
  - a hydrogen,
  - a halogen, a linear or branched alkyl group which comprises 1 to 12 carbon, a cycloalkyl group comprising 3 to 12 carbon atoms, a linear or branched alkoxy group comprising 1 to 12 carbon atoms,
  - a haloalkyl, halocycloalkyl, or haloalkoxy group corresponding to the alkyl, cycloalkyl, alkoxy groups above respectively, which are substituted with at least one halogen atom,
  - a linear or branched alkenyl or alkynyl group comprising 1-12 carbon atoms,
  - a linear or branched alkenoxy or alkynoxy group comprising 1-12 carbon atoms,

an aryl or heteroaryl group having the same definition as that given above for aryl or heteroaryl groups within the definitions of R<sub>3</sub>, R<sub>4</sub>,  
 an aralkyl or heteroaralkyl group, the alkyl group, which is linear or branched, comprising 1 to 4 carbon atoms, and the aryl and heteroaryl groups having the same definitions as those given above for R<sub>3</sub>, R<sub>4</sub>,  
 an amine or amide group: --NH<sub>2</sub>, --NHR<sub>8</sub>, --CONH<sub>2</sub>, --CONHR<sub>8</sub>,



R<sub>8</sub>, and R<sub>9</sub> having their respective definitions given for the amine substituents of the values R<sub>3</sub>, R<sub>4</sub>,

a --C(R<sub>15</sub>)<sub>2</sub>R<sub>11</sub>, --OCOR<sub>15</sub>, or --COOR<sub>15</sub> group, wherein R<sub>11</sub> and R<sub>15</sub> are defined supra in R<sub>3</sub> and R<sub>4</sub>, a methacryloyl group or an acryloyl group,



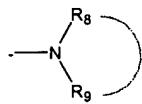
an epoxy group having the formula,

in which q = 1, 2 or 3,

a polyether, polyamide, polycarbonate, polycarbamate, polyurea or polyester residue, or a group with polymerizable residue,

- (b) in the 9-, 10-, 11-, and 12-positions there are at most 4 R<sub>5</sub> groups, each being the same as R<sub>6</sub>, defined hereinbefore; or
- (c) two adjacent R<sub>5</sub> together form a 5- to 7-member aromatic or non-aromatic ring which can comprise at least one heteroatom selected from oxygen, sulfur, and nitrogen, and/or at least one substituent selected from the group consisting of a C1 to C6 alkyl group which is linear, branched, or cyclic, a C1 to C6 alkoxy

group which is linear or branched, and an amine group of formula  $-NH_2$ ,  $NHR_8$ ,  
or



as defined in R<sub>3</sub> and R<sub>4</sub> for amine groups, said aromatic or non-aromatic ring can be  
optionally annelated with a benzene group.

11. (ORIGINAL) The photochromic naphthopyran of claim 10 wherein R<sub>1</sub> and/or R<sub>2</sub>  
represent a para-substituted phenyl group, said substituents on the para-substituted  
phenyl group selected from hydrogen, alkyl, alkoxy, dialkylamino, diarylamino, or R<sub>1</sub>  
and R<sub>2</sub> together form an adamantyl group or norbornyl group or anthracenyldiene  
group;

12. (CANCELLED)

13. (ORIGINAL) A photochromic article comprising a polymeric layer containing a  
photochromic amount of a photochromic naphthopyran according to claim 1.

14. (CURRENTLY AMENDED) A photochromic article comprising a polymeric layer  
containing a photochromic amount of a photochromic naphthopyran comprising 3-phenyl-3-4-methoxyphenyl)-13,13-diethyl-3H-(4,5-dihydrofuran-2,3-b]indeno[3,2-f]-naphtho)[1,2-b]pyran 3-phenyl-3-4-methoxyphenyl)-13,13-diethyl-3H-(4,5-dihydrofuran-2,3-b]indeno[3,2-f]-naphtho)[1,2-b]pyran.

15. (ORIGINAL) A photochromic article comprising a polymeric layer containing a  
photochromic amount of a photochromic naphthopyran according to claim 3.

16. (ORIGINAL) A photochromic article comprising a polymeric layer containing a  
photochromic amount of a photochromic naphthopyran according to claim 4.

17. (ORIGINAL) A photochromic article comprising a polymeric layer containing a photochromic amount of a photochromic naphthopyran according to claim 9.
18. (ORIGINAL) A photochromic article comprising a polymeric layer containing a photochromic amount of a photochromic naphthopyran according to claim 10.
19. (ORIGINAL) A photochromic article comprising a polymeric layer containing a photochromic amount of a photochromic naphthopyran according to claim 11.
20. (CANCELLED)